LAKE MEAD NATIONAL RECREATION

Construction of a Water Safety Center
Boulder Beach

ENVIRONMENTAL ASSESSMENT

Lake Mead National Recreation Area
Clark County, Nevada
Mohave County, Arizona

September 2001

US Department of the Interior, National Park Service

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SECTION 1: PURPOSE AND NEED

Introduction

The National Park Service (NPS) is proposing to construct a water safety center on the west side of the Boulder Basin Ranger Station, within Lake Mead National Recreation Area (NRA) (Figures 1 and 2). The purpose of the project is to provide water safety education opportunities for groups and the general public, and improve the water safety of the recreation area and in the Southern Nevada area.

This environmental assessment evaluates the no action and one action alternative and analyzes the various environmental and public health and safety impacts of each alternative. The alternatives analyzed are Alternative A: No action alternative, no water safety center; and, Alternative B: construction of a water safety center.

Purpose and Need

The primary purpose of this project is to enhance safety for water recreationists at Lake Mead NRA by providing a center that will be used for water safety education and training. Local, state, and federal agencies, private groups, and volunteer organizations would be able to use the safety center to host water safety classes and seminars. These classes would offer a variety of curriculum for a variety of people, including agency personnel and the general public. Courses would be established to encompass the requirements of the Nevada boating education requirements.

Background

Water safety is one of the most important issues at Lake Mead NRA. Improving the safety of the visitor experience, and reducing the number of water-related accidents and deaths, is the foremost goal of the recreation area.

An average of 20 visitors per year lose their lives in water-related accidents in the recreation area. Many of these accidents involve boats and personal watercraft. Inexperienced boaters are a leading factor in boating accidents. Educating visitors could prevent some of these tragic accidents. Water safety education has been inadequate for the boating and recreational community in southern Nevada.

This facility would be dedicated to water safety training. It would provide a meeting area for the numerous water safety groups and local, state, and federal government agencies for meetings, training, and public education. This center would serve as a focal point for water safety groups that serve and utilize Lake Mead NRA.

Improved education and information services for park visitors, and coordinated law enforcement efforts may contribute to a decrease in visitor injuries, fatalities, and search and rescue operations.

Figure 1 – Regional Map
Lake Mead National Recreation Area

Figure 2 – Area Map
Lake Mead National Recreation Area

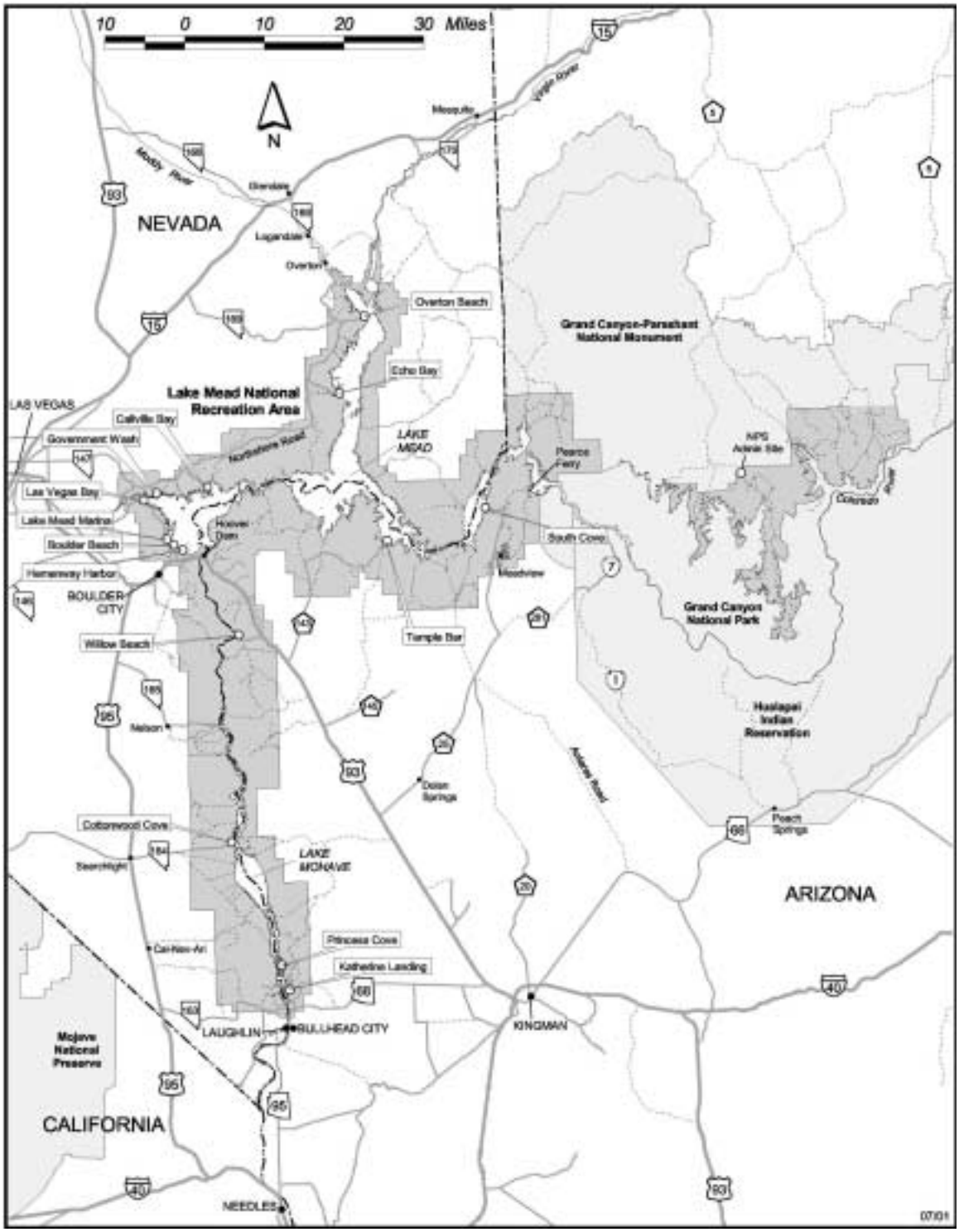

Figure 3 – Water Safety Center Project Area
Boulder Beach Development Zone, Nevada

ENVIRONMENTAL ASSESSMENT

This EA analyzes the proposal and the no-action alternative and their impacts on the natural and human environment. It outlines the project alternatives, describes existing conditions in the project area, and analyzes the effects of each alternative on the environment. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council of Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1508.9).

RELATED LAWS, POLICIES AND PLANNING DOCUMENTS

The enabling legislation for Lake Mead NRA (PL 88-639), established the recreation area "for the general purposes of public recreation, benefit, and use, and in a manner that will preserve, develop and enhance, so far as practicable, the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area, consistent with applicable reservations and limitations relating to such area and with other authorized uses of the lands and properties within such area." The Secretary was authorized, under the Act, to provide for general recreation use. General recreation use was defined within Section 4(b) of this legislation, and included bathing, boating, camping, and picnicking.

The 1986 General Management Plan provided the overall management direction for Lake Mead NRA. It established management zones to accommodate increasing visitor use while protecting park resources. However, many of the current issues were not anticipated and therefore not addressed in the General Management Plan.

The 1993 Lake Mead NRA Statement for Management identified the need for the Lake Management Plan. The 1998 Lake Mead NRA Strategic Plan established goals relating to resource protection, public enjoyment, and visitor satisfaction. The 2001 Strategic Plan has reaffirmed these goals.

NPS Management Policies, 2001, requires the analysis of potential effects to determine if actions would impair park resources. Under the NPS Organic Act and the General Authorities Act, as amended, the NPS may not allow the impairment of park resources and values, except as authorized specifically by Congress. The NPS must always seek ways to avoid or minimize, to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment to the affected resources and values (Management Policies 1.4.3).

The NPS is currently drafting a Lake Management Plan that discusses the educational component of water safety in the recreation area. This plan identifies visitor safety and education as a key component.

The State of Nevada recently passed an act that requires mandatory boater education. This act applies to those persons born on or after January 1, 1983 who wish to operate any vessel with a

motor which exceeds 15 horsepower, on any interstate waters of Nevada, including Lakes Mead and Mohave. The Lake Mead water safety center would serve as the primary center for education related to this act.

ISSUES AND IMPACT TOPICS

The NPS interdisciplinary team has identified potential issues related to the environmental impacts that the alternatives may present.

Impact Topics Identified for Further Analysis

Soils and Vegetation. Soils would be disturbed in the 2.25 acre project area and would be permanently altered from paving and construction activities. Vegetation would be removed from the project area.

Wildlife. The area does not provide high quality wildlife habitat, however, the small mammals, birds, and reptiles that utilize the area would be permanently displaced by construction of the facility and parking lots.

Threatened and Endangered Species. None exist in the project site. Desert tortoise habitat exists nearby but the project site is not suitable habitat.

Air Quality. Air quality may be impacted temporarily during construction activities.

Scenic Quality. The scenic quality of the area around the project site is considered low due to the location in an existing developed area. The building would be constructed in accordance with NPS standards to blend in with the surrounding environment.

Cultural Resources. There are no known cultural resources or sacred sites located in the proposed project areas. The impact to cultural resources is required to be evaluated under Section 106 of the National Historic Preservation Act.

Visitor Use. Temporary closures of certain areas to visitors could occur due to construction activity. Visitor access to boating and water safety information would improve with the proposed project.

Safety. Safety of visitors, park employees, and contractors is considered an important issue and will be considered during the construction activities. Safety of water recreationists could improve if more boating safety courses are available and taken by the general public.

Recreation Area Operations. Personnel would be needed to staff the boating center on an as needed basis, and to provide educational programs.

Issues Considered but Dismissed from Further Consideration

Several issues were considered during the planning process but were considered insignificant or because there were no potential effects to these resources. The project is not located in proposed or potential wilderness. There is no grazing occurring in the project area. None of the alternatives would have adverse impacts on wild and scenic rivers as there are none in the area. There is not standing perennial water in the area so water quality would not be impacted. No riparian areas are located in the project area. The project area is not located in a sole or principal drinking water aquifer, wetland, or floodplain, so no adverse impacts would occur to any of these areas. There are no prime or unique farmlands in the project area. Since the project area is not in a designated ecologically significant or critical area and is not listed on the Department of the Interior's National Registry of Natural Landmarks, no impacts would occur to these resources. The project would have no impact to socially or economically disadvantaged populations (Environmental Justice EO 12898).

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SECTION 2: ALTERNATIVES

Introduction

This section describes the alternative considered in the analysis, including the no action alternative, the management preferred alternative, and a description of any alternatives considered early in the process but later eliminated from further study. Reasons for the dismissal of these alternatives are provided. The alternatives described include mitigation measures proposed to minimize or avoid environmental impacts.

Alternative A: No Action – No Construction of Water Safety Center

Under this alternative there would be no construction of a water safety center.

Alternative B: Construction of Water Safety Center (The Environmentally Preferred Alternative)

The facility would be located on the west side of the Boulder Basin Ranger Station in the center island area and would utilize approximately 2.25 acres (Figures 4 and 5). The facility would be designed with a parking lot to handle 27 vehicles, 26 vehicles with boat trailers, and additional parking for 10 staff vehicles. The building would be approximately 100 feet by 50 feet and would consist of two main rooms (Figure 6 and 7). One room, a 2,200 square-foot multi-purpose meeting room would be designed to accommodate 300 people in an assembly setting and 100 people in a training course. An additional room, measuring 1,250 square feet would be designed for overall training. The facility would be set up with a small multi-purpose kitchen, two small offices, storage area, and restrooms.

Cost and Funding

The estimated planning, design, and construction cost of the water safety center is 1.1 million dollars. The water safety center would be jointly funded by the State of Nevada, through the Nevada Division of Wildlife (NDOW) and the NPS, through the Southern Nevada Public Lands Management Act (SNPLMA). The Clark County Boating Facilities and Safety Committee have also pledged their support of this project. Currently, joint funding totals $750,000. This project is the NPS number one priority project in the next phase of the Southern Nevada Public Lands Management Act capital improvement program.

MITIGATION AND MONITORING

Mitigation measures are specific actions that when implemented reduce impacts, protect park resources, and protect visitors. The following mitigation would be implemented under the alternative(s) specified and are assumed in the analysis of effects for the alternative.

Soils and Vegetation. Areas near construction sites would be landscaped with native species. To the extent practical, disturbed sites would be revegetated with native plant materials (e.g., native

Figure 4 – Proposed Project Area

Figure 5 – Proposed Project Area

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Figure 6 - Water Safety Center Site Plan

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Figure 7 - Water Safety Center Floor Plan

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seeds, transplanted native vegetation) salvaged from areas impacted by construction. To guide restoration efforts, the NPS would follow procedures outlined in the vegetation management plan including procedures for collecting and propagating native species, salvaging topsoil, site grading and soil preparation, erosion control, vegetation reestablishment, and post-construction monitoring.

Threatened and Endangered Species.
There are no threatened, endangered, or sensitive species at the project site. No mitigation would be required.

Air Quality. Dust abatement measures would be utilized during construction activities.

Scenic Quality. The facility would be located and designed to meet the architectural theme of the park and minimize visual intrusion on the landscape.

Cultural Resources. The NPS would comply with Section 106 of the National Historic Preservation Act. The act requires the NPS to identify any cultural resources that could be effected by construction of the water safety center. If cultural resources are identified, the NPS would consult with the State Historic Preservation Officer as required by 36 CFR 800.

Government to government consultation with Native American Tribes would be conducted to identify any issues and areas of concern the Native Americans may have relating to the project area.

Visitor Use. Whenever possible, the NPS would adjust its work schedules, particularly the timing of construction activities, to minimize impacts to park visitors. Facility construction would be prioritized and phased wherever possible to minimize disruption of park operations and visitor use.

Safety. The construction zone would be fenced and visitors would be prohibited from entering the area. Traffic would be directed around the area to avoid conflict with construction equipment and on-site personnel.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER EVALUATION

The alternative to locate the water safety center outside the boundaries of the recreation area was considered but dismissed. There is limited property available adjacent to the recreation area, and the high cost of the available property makes this option economically unfeasible. One of the goals of the water safety center is to be located where water-based recreationists are located, near the lake, providing a centralized location for water safety education. In addition, the close proximity to the lake is necessary for the water-based training that would be a component of the program.

PERMIT REQUIREMENTS

This project does not require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11900 (Protection of Wetlands), or the Fish and Wildlife Coordination Act.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is the alternative that will promote NEPA, as expressed in Section 101 of NEPA. This alternative will satisfy the following requirements:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.

- Ensure for all Americans a safe, healthful, productive, and esthetically and culturally pleasing surroundings.

- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.

- Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.

- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.

- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative B is the environmentally preferred alternative because overall it would best meet the requirements of Section 101 of NEPA. It would improve the safety of water recreationists within the recreation area. In the long-term, it would help visitors enjoy a beneficial use of the recreation area and decrease their risk as more boaters participate in water safety education.

COMPARISON OF IMPACTS

Table 1 summarizes the potential long-term impacts of the proposed alternatives. Short-term impacts are not included in this table but are analyzed in the Environmental Consequences section.

Table 1.
Comparison of Long-Term Impacts from the Alternatives Considered

IMPACT TOPIC	ALTERNATIVE A (NO ACTION)	ALTERNATIVE B (PREFERRED)
Soils and Vegetation	No Impacts	Minor adverse impacts
Wildlife	No Impacts	Minor adverse impacts
Threatened and Endangered Species	No Impacts	No Impacts
Air Quality	No Impacts	Minor adverse impacts
Scenic Quality	No Impacts	Negligible adverse impacts
Cultural Resources	No Impacts	No Impacts
Visitor Use	Potentially moderate adverse impacts	Moderate beneficial effects
Safety	Potentially moderate adverse impacts	Moderate beneficial effects
Recreation Area Operations	Potentially minor adverse impacts	Moderate beneficial effects

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SECTION 3: AFFECTED ENVIRONMENT

Introduction

This section describes the portion of the natural and human environment that may be affected by the proposal. The project area is located between the Boulder Beach Ranger Station and Lakeshore Road. It is on a previously disturbed site between the access roads to Lake Mead Lodge and Boulder Beach. The site is surrounded by paved roads which effectively creates a 2.25 acres island.

Natural Resources

The soils within the developed zone of Boulder Beach are generally previously disturbed rocky soils consisting of a mix of sand and gravel in a broad alluvial fan. The Boulder Beach developed area occurs in the creosote bush community. The vegetation in the project area consists primarily of native creosote (*Larrea tridentata*), brittle bush (*Encelia faranosa*), sweetbush (*Bebbia juncea* var. *aspera*), and catclaw (*Acacia greggii*) intermingled with non-native species such as palm trees and oleander. The area has been burned in the recent past with many plants, particularly palm trees, showing blackened fire scars.

Small mammals, reptiles, and coyotes are found within the developed zone at Boulder Beach. No sensitive, threatened, or endangered plant or animal species are known to occur in the project area. However, desert tortoise habitat is located nearby across Lakeshore Road. A permanent tortoise fence prevents tortoise from traveling across Lakeshore Road into the project site.

Cultural Resources

Cultural resource inventories in the Boulder Beach developed zone have identified a number of historic and prehistoric resources. The prehistoric resources include artifact scatters, cleared areas, and rock shelters. The historic resources include structures related to early mining activities, the construction of Hoover Dam, and early park development.

The project area was inventoried for cultural resources and none were located (Ervin 1986). A reconnaissance survey of the project area was conducted by the park archeologist on August 1, 2001. No cultural resources were located in the project area and no historic structures were observed in the viewshed.

Socioeconomic Resources and Visitor Use

The proposed project location is within the Boulder Beach development zone. The Boulder Beach zone is one of the most heavily visited portions of the recreation area. The area provides numerous recreational opportunities. There is a concession-operated lodge and marina, trailer village and campground; and government-maintained launch ramps, campground, picnic areas, and ranger station. The main water-related activities include fishing, scuba diving, swimming, boating, jetskiing, water-skiing, and sailboarding.

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SECTION 4: ENVIRONMENTAL CONSEQUENCES

Introduction

The environmental consequences section analyzes both beneficial and adverse impacts that could result from the two alternatives. Impacts are evaluated based on context, duration, intensity, and whether they are direct, indirect, or cumulative impacts.

Methodology

This section contains the environmental impacts, including direct and indirect effects and their significance to the alternatives. It also assumes that the mitigation identified in the *Mitigation and Monitoring* section of this environmental assessment would be implemented under any of the applicable alternatives, as identified in each mitigation criteria.

Impacts are evaluated based on the most current and comprehensive scientific and social data available. Much of the information found was generated by the Lake Mead NRA biologists, resource management specialists whose focus is on wildlife and vegetation, and archaeologists. Follow-up contacts with these specialists were made to assist with interpreting the information, and to provide additional information related to impacts. In the absence of quantitative data, best professional judgement prevailed.

Cumulative Impacts

Cumulative impacts were analyzed for the alternatives and the environmentally preferred alternative. Cumulative impacts are the incremental impacts on the environment resulting from adding the alternatives to other past, present, and reasonably foreseeable future actions. This includes potential actions within and outside the recreation area boundary. The geographical boundaries of analysis vary depending on the impact topic and potential effects. While this information may be inexact at this time, major sources of impacts have been assessed as accurately and completely as possible, using all available data.

Table 2
Past, Present, and Reasonably Foreseeable Future Actions
Considered in the Cumulative Effects Analysis

CUMULATIVE ACTION	PAST	PRESENT	FUTURE
Population Growth And Urban Development	**X**	**X**	**X**
Increased Boating Activity in Lake Mead NRA	**X**	**X**	**X**
State requirements for Mandatory Boater Education		**X**	**X**

Population growth in the Las Vegas Valley and in Clark County has contributed to increased visitation to the recreation area. According to the U.S. Census Bureau, in 2000, the population of the greater Las Vegas area was estimated at just over 1.4 million, with an average growth of nearly 7,000 new residents per year. It is predicted that the population of the Las Vegas area will reach two million people by 2005. With the predicted increases in population in the local area, and continuing visitation from California and Arizona, park visitation will continue to increase above the current 8 to 10 million visitors per year.

The park is working on developing a Lake Management Plan that would establish management direction for the recreational uses of the lakes. Within this plan would be alternatives that address zoning for a variety of recreational uses, boating numbers and densities, potential marina expansions, and overall lake carrying capacity. Increased boating use is likely in the future, and will be addressed under this plan. The cumulative impacts of increased boating use are considered in the consequences section of this environmental assessment.

The State of Nevada recently passed a requirement for mandatory boating education for all boat operators born on or after January 1, 1983. This is an effort to improve boating safety within the state. It will impact boaters on Lake Mead and Mohave.

Terminology

There are several terms used within the environmental consequences section to assess the impacts of each alternative on each impact topic. Unless otherwise stated, the standard definitions for these terms are:

Negligible - the impact is at the lower level of detection; no measurable change would occur.

Minor - the impact is slight, but detectable; a small change would occur over the life of the plan.

Moderate - the impact is readily apparent; a measurable change would occur and could result in a small but permanent change.

Major - the impact is severe; a permanent measurable change of at least 15 percent over the life of the plan would occur.

Impairment - the impact would harm the entire integrity of the resource or value, whose conservation is key to the cultural or natural integrity of the recreation area, or is a resource or value needed to fulfill a specific purpose identified in the park's enabling legislation.

Localized Impact - the impact occurs in a specific site or area, individual wildlife, or the wildlife group. When comparing changes to existing conditions, the impacts are only detectable in the localized area.

Short-term - the impact occurs only during or immediately after the actual management activity.

Long-term - the impact could occur for an extended period of time after the management activity has been completed. The impact could take several years or more and could be beneficial or adverse.

Impairment Analysis

In addition to determining the environmental consequences of the alternatives, impairment to park resources and values have been analyzed within this document. Impairment is an impact that, in the professional judgement of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact would be more likely to constitute an impairment to the extent that it effects a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; is the key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or is identified as a goal in the park's general management plan or other relevant NPS planning documents. An impact would be less likely to constitute an impairment to the extent that it is an unavoidable result, which cannot be reasonably further mitigated, of an action necessary to preserve or restore the integrity of park resources or values.

RELATED LAWS, REGULATIONS, AND POLICIES FOR IMPACT TOPICS

Soils and Vegetation

The NPS Organic Act directs the park to conserve the scenery and the natural objects unimpaired for future generations. Soil resources will be protected by preventing or minimizing adverse potentially irreversible impacts on soils, in accordance with NPS Management Policies.

NPS-77 specified objectives for each management zone for soil resources management. These management objectives are defined as: (1) natural zone - preserve natural soils and the processes of soil genesis in a condition undisturbed by humans; (2) cultural zone - conserve soil resources to the extent possible consistent with maintenance of the historic and cultural scene and prevent soil erosion wherever possible; (3) park development zone - ensure that developments and their management are consistent with soil limitations and soil conservation practices; and, (4) special use zone - minimize soil loss and disturbance caused by special use activities, and ensure that soils retain their productivity and potential for reclamation.

Zones within the recreation area have been designated in the Lake Mead NRA General Management Plan, which provides the overall guidance and management direction for Lake Mead NRA.

NPS Management Policies defines the general principles for managing biological resources as maintaining all native plants and animals as part of the natural ecosystem. When NPS management actions cause native vegetation to be removed, then the NPS will seek to ensure that such removals will not cause unacceptable impacts to native resource, natural process, or other park resources.

Exotic species, also referred to as non-native or alien, are not a natural component of the ecosystem. They are managed, up to and including eradication, under the criteria specified in Management Policies and NPS-77.

Wildlife
The NPS Organic Act, which directs parks to conserve wildlife unimpaired for future generations, is interpreted by the NPS to mean native animal life should be protected and perpetuated as part of the recreation area's natural ecosystem. Natural processes are relied on to control populations of native species to the greatest extent possible. The restoration of native species is a high priority. Management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, including natural abundance, diversity and ecological integrity of plants and animals.

Threatened and Endangered Species
Section 7 of the Endangered Species Act mandates all federal agencies to determine how to use their existing authorities to further the purposes of the Act to aid in recovering listed species, and to address existing and potential conservation issues. Section 7(a)(2) states that each federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.

Management Policies directs the parks to survey for, protect, and strive to recover all species native to National Park System units that are listed under the Endangered Species Act (4.4.2.3). It sets the direction to meet the obligations of the Act. Management Policies also directs the NPS to inventory, monitor, and manage state and locally listed species, and other native species that are of special management concern to the parks, to maintain their natural distribution and abundance.

Air Quality
Lake Mead NRA is designated as a Class II Air Quality area under the Clean Air Act. The main purpose of this act is to protect and enhance the nation's air quality to promote the public health and welfare. The act establishes specific programs to provide protection for air resources and values, including the program to prevent significant deterioration of air quality in clean air regions of the country. Although Lake Mead NRA is designated as a Class II Air Quality area, the park strives to maintain the highest air quality standards, and project work within the recreation area is undertaken in accordance with regional standards. However, the recreation area does not possess sufficient autonomous authority to address issues of air quality improvements when air pollution originates outside the boundaries.

NPS Management Policies direct parks to seek to perpetuate the best possible air quality to preserve natural and cultural resources, sustain visitor enjoyment, human health, and preserve scenic vistas (4.7). Parks are directed to comply with all federal, state, and local air quality regulations and permitting requirements.

Scenic Quality
The enabling legislation of Lake Mead NRA specifically addresses the preservation of the scenic features of the area. The NPS manages the natural resources of the park, including highly valued associated characteristics such as scenic views, to maintain them in an unimpaired conditions for future generations (Management Policies 4).

Cultural Resources
Numerous legislative acts, regulations, and NPS policies provide direction for the protection, preservation, and management of cultural resources on public lands. Further, these laws and policies establish what must be considered in general management planning and how cultural resources must be managed in future undertakings resulting from the approved plan regardless of the final alternative chosen. Applicable laws and regulations include the NPS Organic Act (1916), the Antiquities Act of 1906, the National Historic Preservation Act of 1966 (1992, as amended), the National Environmental Policy Act of 1969, the National Parks and Recreation Act of 1978, the Archeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, and the Curation of Federally Owned and Administered Archeological Collections (1991).

Applicable agency policies relevant to cultural resources include Chapter 5 of NPS Management Policies, and the Cultural Resource Management Guideline (DO-28), as well as other related policy directives such as the NPS Museum Handbook, the NPS Manual for Museums, and Interpretation and Visitor Services Guidelines (NPS-26).

In addition, consultation with Native American groups is required under Executive Memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments, Executive Order 13007 of May 24, 1996, Indian Sacred Sites, and Executive Order of May 14, 1998, Consultation and Coordination with Indian Tribal Governments.

Visitor Use
Visitor use in parks is authorized in the NPS Organic Act and managed under the NPS Management Policies under Chapter 8, "Use of Parks" that includes commercial as well as public use. Recreational purposes and activities authorized at Lake Mead NRA are more specifically defined in Section 4 of the area's enabling legislation, Public Law 88-639.

Safety
Management Policies (8.2.5) establishes the goal of protecting human life and providing for injury-free visits. The NPS and its concessioners, contractors, and cooperators will seek to provide a safe and healthful environment for visitors and employees. Education is identified as an appropriate measure to help improve the safety of visitors. The Lake Mead NRA Strategic Plan identifies a goal of providing visitors with a safe recreational experience. It also establishes a goal of reducing the number of visitor accidents and incidents.

Recreation Area Operations
Recreation area operations relate to the management of Lake Mead NRA. The goals of recreation area operations are identified in the Lake Mead NRA Strategic Plan.

ALTERNATIVE A: NO ACTION

Soils and Vegetation: There would be no impact to soils and vegetation under this alternative since construction would not occur within the recreation area.

Cumulative Impacts: There would be no cumulative impacts under the no action alternative to soils and vegetation.

Conclusion: There would be no impacts and no impairment to soils and vegetation from Alternative A.

Wildlife: There would be no impact to wildlife under this alternative since construction would not occur.

Cumulative Impacts: There would be no cumulative impacts to wildlife.

Conclusion: There would be no impacts and no impairment to wildlife from Alternative A.

Threatened and Endangered Species: There would be no impacts to threatened, endangered, and other sensitive species under this alternative since no construction would occur.

Cumulative: No cumulative impacts would occur to threatened and endangered species.

Conclusion: No impacts and no impairment would occur to threatened, endangered, and sensitive species.

Air Quality: There would be no impacts to air quality under this alternative since no construction would occur.

Cumulative Impacts: Impacts in the vicinity of Boulder Beach to air quality are evident during windy conditions when particulate matter and dust are visible. Visual impacts to air quality in the Boulder Beach area can occur when pollution from adjacent communities circulates into the recreation area. The primary impact is haze and reduced clarity of the air.

Conclusion: There are ongoing cumulative impacts from surrounding areas and dust and wind conditions. There would be no additional impacts to air quality from this alternative and no impairment of air quality.

Scenic Quality: There would be no impact to scenic quality.

Cumulative Impacts: The scenic quality of the Boulder Beach developed zone has been previously impacted by the existing facilities. The facilities located in the zone, including the campgrounds, ranger station, and lodge, are not natural in appearance and could detract from the

scenery. However, visitors to the developed zones generally expect buildings and facilities. There are opportunities nearby for natural scenes.

Conclusion: No additional impacts to scenic quality would occur as no construction would take place. No impairment would occur.

Cultural Resources: There would be no impacts to cultural resources under this alternative since no construction or ground disturbance would take place…

There would be no impacts to sacred sites.

Cumulative: No cumulative impacts would occur to cultural resources.

Conclusion: There would be no impacts to cultural resources from Alternative A and no impairment to cultural resources.

Visitor Use: Visitors would not be provided with an educational facility where they could learn about water safety and boat operations. Visitors may not be satisfied by their recreational experience if they witness unsafe acts. Visitors would not be satisfied by their recreational experience at Lake Mead NRA if they are involved in an accident.

Cumulative: Visitor use would remain unaltered. Some dissatisfaction would continue and could increase without further education of visitors.

Conclusion: The no action alternative could negatively impact visitor use by not providing opportunities for water safety education. Visitors would be dissatisfied if they have an unsafe recreational experience. There would potentially be moderate adverse impacts. No impairment would occur.

Safety: Water safety would likely not improve under the no-action alternative. The accident rate could increase without an education facility in place. Visitors would have no place to participate in educational courses on water and boating safety, therefore, mandatory safety requirements would be difficult to implement.

Cumulative Impacts:. As visitation increases and more boaters are using Lakes Mead and Mohave, it is likely that without a water safety center that water-related accidents would continue to increase.

Conclusion: The no action alternative would negatively impact safety, and prevent park management from reaching the goal of improving water safety, and reducing water-related accidents. Visitors could be permanently impaired if they are involved in a water-related accident. Overall, there would be moderate adverse impacts to recreation area safety.

Recreation Area Operations: Under the no action alternative, there would be no additional staff required and no additional moneys required for the construction and management of the

water safety center. However, additional park staff would be needed to provide law enforcement and interpretive activities throughout the recreation area to educate and enforce regulations to help reduce the safety hazards related to water activities.

Cumulative Impacts: No cumulative impacts would occur to recreation area operations.

Conclusion: Staff would be required under the no action alternative to provide education and enforcement. There would be minor adverse impacts to recreational area operations. No impairment would occur.

ALTERNATIVE B – THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

Soils and Vegetation: An area of 2.25 acres would be permanently disturbed due to construction activities. Although the majority of the acres is bare ground with some annual plants, there would be some shrubs removed, including creosote, brittlebush, sweetbush, and catclaw. Non-native plants, such as palm trees and oleander, would be removed. The area not occupied by the structure and parking lots would be landscaped and replanted with native vegetation.

Cumulative Impacts: The Boulder Beach developed zone has been heavily impacted by the development of facilities. The purpose of the developed zones is to provide facilities for visitor use. Developed zones throughout the recreation area have impacted approximately 800 acres of the recreation area's 1.3 million acres. The project area is located within a developed zone and would add 2.25 acres of impact to the recreation area.

Conclusion: Approximately 2.25 acres of soil and vegetation would be removed. When considering the project is in a previously disturbed development zone, this impact is considered a minor adverse impact. No impairment of soils and vegetation would occur.

Wildlife: There are small mammals, birds, and reptiles located within the construction zone. These animals could be directly impacted by the construction activities through loss of nests, dens and burrows, and loss of life. This is a small area of low quality wildlife habitat, and generally, wildlife would move away from the construction activities. There is available habitat nearby. This is a minor impact since few species could be disturbed. Larger mammals, like coyotes, would avoid the project area during construction activities.

Cumulative Impacts: Wildlife habitat in the Boulder Beach development zone, and other development zones, has been permanently altered by the construction of facilities, parking lots, and the planting and irrigation of non-native vegetation. The area still supports some wildlife, such as small mammals, reptiles, birds, and coyotes. This alternative would displace additional wildlife, but would not add to the loss of habitat since the area is inside the development zone is considered low quality habitat.

Conclusion: Minor adverse impacts to wildlife would occur from loss of a small portion of low quality habitat within the development zone. Construction could permanently displace or

potentially injure or kill the few animals that can not move away from the construction activities. Overall, no impairment to wildlife or wildlife habitat would occur.

Threatened and Endangered Species: No threatened, endangered, or sensitive species exist in the project area nor is it considered potential habitat. Nearby areas support populations of desert tortoises, but these areas are across Lakeshore Road and tortoises can not cross the road due to the permanent tortoise fence. This project would have no effect on the desert tortoise.

Cumulative Impacts: No cumulative impacts would occur to threatened and endangered species.

Conclusion: This alternative would have no effect on the desert tortoise. No other threatened, endangered, or sensitive species are present in or nearby the project area. There would be no impact to these species and no impairment would occur.

Air Quality: There would be slight, localized impacts to air quality during the construction activity, but mitigation would reduce these measures. Construction activities generate dust and pollution from the use of heavy equipment. This would occur only during construction, for a period of 3 to 6 months, and would be localized in the construction zone.

Cumulative Impacts: Cumulative impacts to air quality were discussed under Alternative A. This project would not add to those impacts other than on a localized basis during the construction period.

Conclusion: There would be minor adverse impacts to air quality in the construction zone. No impairment would occur.

Scenic Quality: This project is consistent with the standards for the recreation area development zones. It would not further detract the scenic quality of the Boulder Beach development zone.

Cumulative Impacts: The cumulative impacts to the area are the same as discussed under Alternative A. The proposed project would add another building to the Boulder Beach development zone, but the building design and coloring would serve to blend in with the surrounding desert and not add to the existing impacts. There are no further plans for building construction in this zone.

Conclusion: Buildings do detract from the scenic quality of an area. However, this impact is considered negligible since visitors expect services and buildings within development zones. No impairment of the scenic resources would occur.

Cultural Resources: The project area was inventoried for cultural resources and none were located (Ervin 1986). A reconnaissance survey of the project area was conducted by the park archeologist on August 1, 2001. No cultural resources were located in the project area and no historic structures were observed in the viewshed.

Cumulative Impacts: No cumulative impacts would occur to cultural resources.

Conclusion: There would be no impact to cultural resources from Alternative B and no impairment of cultural resources.

Visitor Use: Visitors would be able to utilize the facility to acquire information and education on water and boating safety. Visitors who complete coursework would have a better understanding of safe boating operations, and this could result in improved recreational experiences.

Cumulative Impacts: No cumulative impacts would occur to visitor use.

Conclusion: This facility would serve the visitors and could improve their recreational experiences by improving overall water safety and visitor understanding of boating regulations and operations. There would be moderate beneficial effects. No impairment would occur.

Safety: Safety could improve if mandatory education requirements are adopted. This facility would provide education and information on boating and water safety to the general public and others.

Cumulative Impacts: As mandatory educational requirements are adopted in the area, and boaters participate in water safety courses, safety should improve in the recreation area and this even could improve safety in other areas in the region.

Conclusion: Safety would improve as people participate in water safety education at the facility and if mandatory education requirements are adopted. There would be moderate beneficial effects. No impairment would occur.

Recreation Area Operations: Staff and volunteers would be assigned to work at the facility on an as needed basis only. Personnel and volunteers from local, state, and other federal agencies, as well as private groups, would be used for staffing the facility and to help provide training. This facility would not warrant any new NPS positions.

Cumulative Impacts: There would be no cumulative impacts.

Conclusion: Cooperative efforts would be required to support the operations at the water safety facility. No additional NPS staff would be hired for this facility. There would be moderate beneficial effects as NPS staff and volunteers work cooperatively with other agency personnel, and outside organizations and volunteers. There would be no impairment.

SECTION 5: COORDINATION AND CONSULTATION

This project is a cooperative effort between the NPS and the Nevada Division of Wildlife.

Public notice of the availability of this environmental assessment was published in local newspapers, and on the Lake Mead NRA Internet Web site (http://www.nps.gov/lame). Individuals and organizations could request the environmental assessment in writing, by phone, or by e-mail. The environmental assessment was circulated to various federal and state agencies, individuals, businesses, and organizations on the park's mailing list for a 30-day public review period. Copies of the environmental assessment were made available at area libraries.

The Las Vegas Band of the Southern Paiute will be consulted with on the proposed project.

A copy of the environmental assessment can be obtained by direct request to:

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National Park Service
Lake Mead National Recreation Area
601 Nevada Highway
Boulder City, Nevada 89005
Telephone: (702) 293-8756
Facsimile: (702) 293-8008

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SECTION 7: REFERENCES

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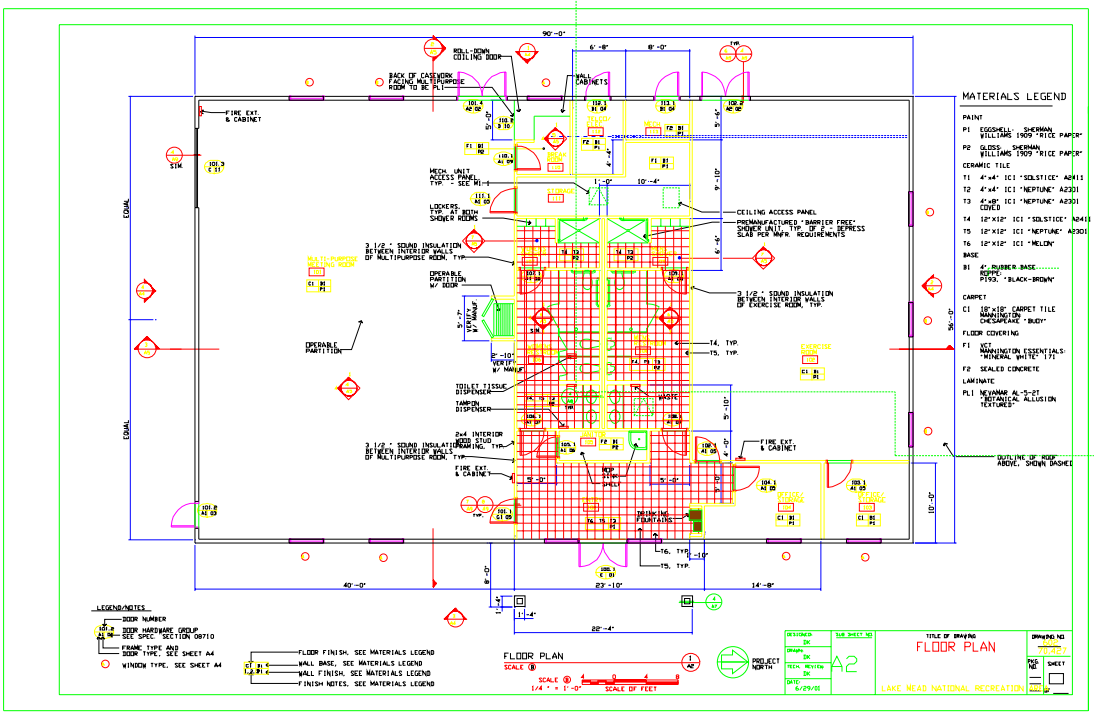
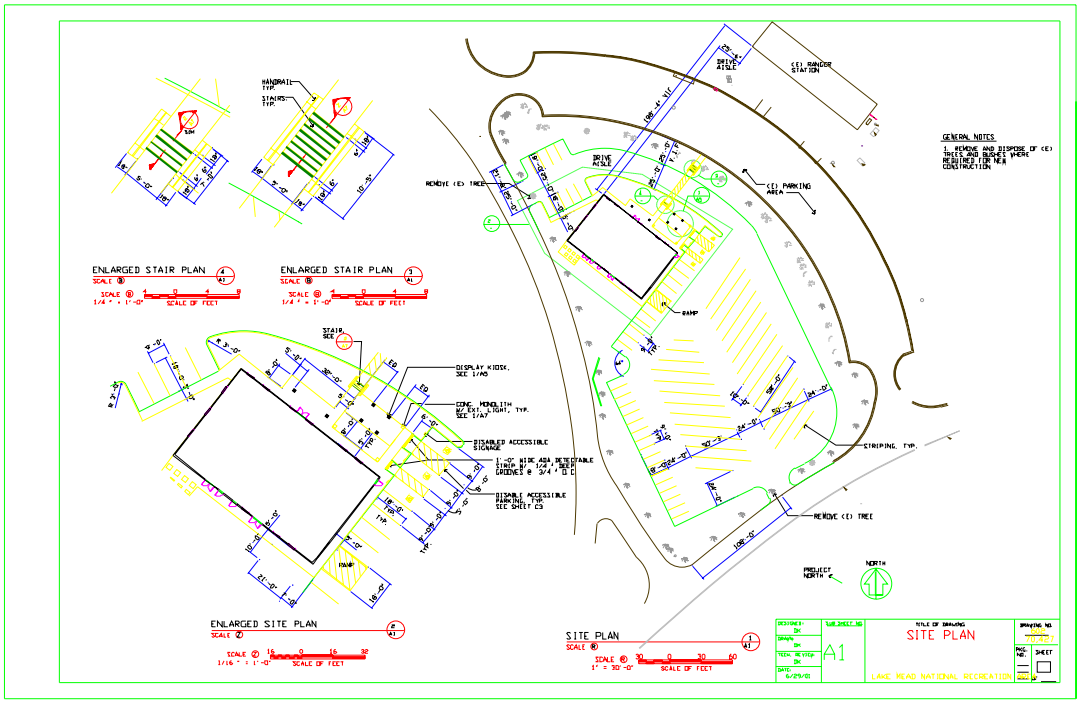

MATERIALS LEGEND
PAINT
P1 EGGSHELL SHERWIN WILLIAMS 1909 "RICE PAPER"
P2 GLOSS SHERWIN WILLIAMS 1909 "RICE PAPER"
CERAMIC TILE
T1 4"x4" ICI "SOLSTICE" A2411
T2 4"x4" ICI "NEPTUNE" A2301
T3 4"xBE ICI "NEPTUNE" A2301 COVED
T4 12"X12" ICI "SOLSTICE" A2411
T5 12"X12" ICI "NEPTUNE" A2301
T6 12"X12" ICI "MELON"
BASE
B1 4" RUBBER BASE..... ROPPE P150, "BLACK-BROWN"
CARPET
C1 18"x18" CARPET TILE MANNINGTON CHESAPEAKE "BUOY"
FLOOR COVERING
F1 VCT MANNINGTON ESSENTIALS: "MINERAL WHITE" 171
F2 SEALED CONCRETE
LAMINATE
PL1 NEVAMAR AL-5-2T "BOTANICAL ALLUSION TEXTURES"
LEGEND/NOTES
FLOOR PLAN
FLOOR PLAN
A2
LAKE MEAD NATIONAL RECREATION


GENERAL NOTES
1. REMOVE AND DISPOSE OF (E) TREES AND BUSHES WHERE REQUIRED FOR NEW CONSTRUCTION
ENLARGED STAIR PLAN
ENLARGED STAIR PLAN
ENLARGED SITE PLAN
SITE PLAN
SITE PLAN
A1
LAKE MEAD NATIONAL RECREATION